English Translation of

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SPECIFICATION

1. Title of the Utility Model

PORTABLE CORDLESS TELEPHONE SET

2. Claims

A portable cordless telephone set having a receiver, a transmitter, a transceiver, push buttons, and the like installed into a housing,

characterized in that said housing comprises:

an electrically conductive receiver-side housing which functions as one of elements of a dipole antenna;

an electrically conductive transmitter-side housing which functions as the other element of the dipole antenna; and

an electrically insulating housing being provided between said receiver-side housing and said transmitter-side housing, and electrically insulating said receiver-side housing from said transmitter-side housing.

3. Detailed Description of the Utility Model

(Industrial Field of the Utility Model)

The present utility model relates to a portable cordless telephone set having a receiver, a transmitter, a transceiver, push buttons, and the like which are installed into a housing.

(Prior Art)

As antennas for portable cordless telephone sets, there have been conventionally proposed a whip antenna provided outside of the housing, and a ferrite antenna, a loop antenna, and the like each installed into the housing.

(Problems to be solved by the Utility Model)

The whip antenna has advantageously a high antenna gain. However, since the whip antenna is configured to protrude from the housing, the whip antenna has such problems that it is difficult to use the telephone, and in that the antenna and the telephone are easily damaged.

Since the ferrite antenna, the loop antenna, or the like is installed into the telephone, these antennas have such advantages that it is easy to use the telephone, and in that each antenna and the phones are not easily damaged. However, these antennas have disadvantageously low antenna gain since a sufficient antenna effective length is not ensured.

The present utility model has been achieved in light of these disadvantages. It is an object of the present utility model to provide a portable cordless telephone set which makes it difficult to damage an antenna and the telephone, and which includes the antenna having high antenna gain.

(Means for Solving the Problems)

According to the present utility model, a housing of a portable cordless telephone set comprises: an electrically conductive

receiver-side housing which functions as one of elements of a dipole antenna; an electrically conductive transmitter-side housing which functions as the other element of the dipole antenna; and an electrically insulating housing being provided between the transmitter-side housing and the receiver-side housing, and electrically insulating the receiver-side housing from the transmitter-side housing.

(Function)

By allowing the housing of the portable cordless telephone set itself to function as the dipole antenna, the antenna does not protrude from the housing, and the antenna and the telephone are not easily damaged. In addition, since an effective area of the antenna is larger than that of an antenna installed into the housing, high antenna gain can be attained.

(Embodiment)

A figure shows a configuration of one embodiment of the present utility model. Reference symbol 1 denotes a receiver-side housing into which a receiver (not shown) and the like are installed, and 2 denotes a transmitter-side housing into which a transmitter (not shown) and the like are installed, and outside of which an operation section 3 and the like are provided. A length of a grip part 2a of this transmitter-side housing 2 is set larger than that of a grip part 1a of the receiver-side housing 1. Reference symbol 4 denotes an electrically insulating housing which interposes between the receiver-side housing 1 and the transmitter-side housing 2, and which electrically insulates the housings 1 and 2 from each other. Reference symbol 5 denotes an

antenna feeding point which electrically excites the receiver-side housing 1 and the transmitter-side housing 2. In the actual telephone, this antenna feeding point 5 is installed in either the receiver-side housing 1 or the transmitter-side housing 2.

In the present embodiment constituted as stated above, if a high-frequency current is made to flow from the antenna feeding point 5 into the receiver-side housing 1 and the transmitter-side housing 2, the receiver-side housing 1 and the transmitter-side housing 2 function as a dipole antenna which makes the best use of the housing of the portable cordless telephone set and which has high efficiency.

By providing the electrically insulating housing 4 so as to shift its installation position toward the receiver-side from a middle of the overall housing, the feeding point 5 is located so as to be higher than the part to touch, deterioration of antenna characteristics caused by the influence of a hand grip position can be reduced.

Further, in the present embodiment, the instance in which the length of the grip part 2a of the transmitter-side housing 2 is set larger than that of the grip part 1a of the receiver-side housing 1 has been described. Alternatively and conversely, the length of the grip part 1a of the receiver-side housing 1 may be set to be larger than that of the grip part 2a of the transmitter-side housing 2.

(Effects of the Utility Model)

As described so far, according to the present utility model, the housing of the portable cordless telephone set itself is allowed to function as the dipole antenna. Therefore, the antenna does not

protrude from the housing, and the antenna and the telephone are not easily damaged. In addition, since the effective area of the antenna is larger than that of the antenna installed into the housing, high antenna gain can be attained.

4. Brief Description of the Drawing

A figure is a block diagram of one embodiment of the present utility model.

1: receiver-side housing, 2: transmitter-side housing, 4: electrically insulating housing, and 5: antenna feeding point

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審査請求　未請求　（全　頁）

⑤4考案の名称　携帯型コードレス電話器

⑳実　願　昭62－127802

㉒出　願　昭62(1987)8月22日

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明　　細　　書

1．　考案の名称　　携帯型コードレス電話器

2．　実用新案登録請求の範囲

受話器、送話器、送受信器、プッシュボタン等を筐体に装着した携帯型コードレス電話器において、前記筐体が、ダイポールアンテナの一方の素子として機能する導電性の受話器側筐体と、前記ダイポールアンテナの他方の素子として機能する導電性の送話器側筐体と、前記受話器側筐体と前記送話器側筐体との間に介装されて、それ等を電気的に絶縁する絶縁筐体とからなることを特徴とする携帯型コードレス電話器。

3．　考案の詳細な説明

（産業上の利用分野）

本考案は、受話器、送話器、送受信器、プッシュボタン等を筐体に装着した携帯型コードレス電話器に関するものである。

（従来の技術）

従来、携帯型コードレス電話器用のアンテナと

しては、筐体に外装するホイップアンテナや、筐体に内装するフェライトアンテナ、ループアンテナ等がある。

（考案が解決しようとする問題点）

ところで、ホイップアンテナは、アンテナ利得が高いという特長がある反面、アンテナが筐体から突出する構造になっているため、電話器が使用し難く、且つ、アンテナや電話器を破損し易いという問題があった。

又、フェライトアンテナ、ループアンテナ等は、電話器に内蔵されているため、電話器が使用し易く、且つ、アンテナや電話器が破損し難いという特長がある反面、十分なアンテナ実効長が得られないため、アンテナ利得が低いという問題があった。

本考案は、このような問題に鑑みてなされたもので、アンテナや電話器が破損し難く、且つ、アンテナ利得が高いアンテナを具備した携帯型コードレス電話器を提供することを目的としている。

（問題点を解決するための手段）

本考案は、携帯型コードレス電話器の筐体を、ダイポールアンテナの一方の素子として機能する導電性の受話器側筐体と、ダイポールアンテナの他方の素子として機能する導電性の送話器側筐体と、送信器側筐体と受信器側筐体との間に介装して、それ等を電気的に絶縁する絶縁筐体とで構成したものである。

（作　用）

携帯型コードレス電話器の筐体自体をダイポールアンテナとすることにより、アンテナが筐体から突出しなくなって、アンテナや電話器が破損し難くなると共に、筐体に内装するアンテナに比較してアンテナ実効面積が大きくなるので、アンテナ利得が高くなる。

（実施例）

図は本考案の一実施例の構成を示すもので、1は受話器（図示しない）等を内装した受話器側筐体、2は送話器（図示しない）等を内装し、且つ、操作部3等を外装した送話器側筐体で、この送話器側筐体2の握り部分2aの長さは受話器側筐体1の

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握り部分１aの長さより長く形成されている。４は受話器側筐体１と送話器側筐体２との間に介装して、それ等を電気的に絶縁する絶縁筐体、５は受話器側筐体１と送話器側筐体２とを電気的に励振するアンテナ給電点で、このアンテナ給電点５は実際には受話器側筐体１或いは送話器側筐体２に内装されている。

このように構成された本実施例において、アンテナ給電点５から受話器側筐体１及び送話器側筐体２に高周波電流を流せば、受話器側筐体１と送話器側筐体２とは、携帯型コードレス電話器の筐体を最大限に利用した効率の高いダイポールアンテナとして機能する。

尚、手で触れる部分よりも給電点５が上に位置するように、絶縁筐体４の設置位置を筐体全体の真中から受話器側にずらして設けることにより、手の握り位置の影響によるアンテナ特性の劣化を軽減することができる。

又、本実施例では、送話器側筐体２の握り部分２aの長さを受話器側筐体１の握り部分１aの長さ

よりも長くした例で声明したが、逆に、受話器側筐体１の握り部分１aの長さを送話器側筐体２の握り部分２aの長さよりも長くしてもよい。

（考案の効果）

以上説明したように、本考案によれば、携帯型コードレス電話器の筐体自体がダイポールアンテナとなっているので、アンテナが筐体から突出しなくなって、アンテナや電話器が破損し難くなると共に、筐体に内装するアンテナに比較してアンテナ実効面積が大きくなるので、アンテナ利得が高くなるという効果がある。

4．　図面の簡単な説明

図は本考案の一実施例の構成図である。

１ … 受話器側筐体、　２ … 送話器側筐体、　４ … 絶縁筐体、　５ … アンテナ給電点。

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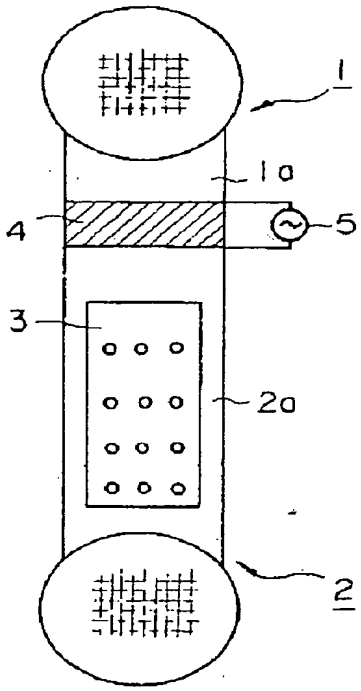

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